

Service Manual

Linear Phase Speaker System

SB-5300A (FE)

Note: The model SB-5300A (FE) is available
in East PX and European Military.



■ SPECIFICATIONS

(Specifications are subject to change without notice for further improvement)

Type: 2-way, 2-speaker bass-reflex system
 Speakers: Woofer: 30cm (12") cone type
 Tweeter: 6cm (2-3/8") cone type
 Impedance: 6 ohms
 Instantaneous Maximum Input Power: 100 watt (peak)
 Output Sound Pressure Level: 92.0 dB/W (at 1.0m)
 Crossover Frequency: 2,000 Hz
 Frequency Range: 40 ~ 20 kHz (−10 dB)

Note: The frequency range was determined by measuring, in an anechoic chamber, the low-range frequency and the high-range frequency at a point 10 dB lower than the average sound-pressure level of the measured frequency response.

Dimensions: 380 (W) x 721 (H) x 294 (D) cm
 15" (W) x 28-3/8" (H) x 11-1/2" (D)
 Weight: 19.0 kg (41.9 lbs.)

■ INSTANTANEOUS MAXIMUM INPUT POWER

The instantaneous maximum input of this speaker system is 100 watts (peak). If excessive input is applied to the speaker system, the temperature of the voice coil will increase, and, if such a condition persists, the voice coil will eventually overheat and burn out. Therefore, with the temperature increase of the woofer voice coil fixed at a specified limit of 80°C, and the tweeter voice coil fixed at a specified limit of 120°C, the instantaneous maximum input has been determined by measurements of the temperature increase of each voice coil with sine-waves, tone-burst waves, music etc.

The allowable input power differs depending upon the wave shape and the frequency of the input signal, and the various aspect of these factors is shown in figure 1. As you can see from the graph in figure 1, a tone-burst of four cycles ON and twenty-eight cycles OFF at about 100 watts (peak), presents no problem in the temperature increase of the voice coil.

Thus based on the given temperature increased of the voice coil, the instantaneous maximum input of this speaker system of 100 watts (peak) was determined.

To protect your speaker from damage and to preserve it's delicate sound character, we suggest that you do not subject your speaker to any of the following conditions:

1. Interstation hiss on FM.
2. Output from a tape deck during fast forward or rewind.
3. Acoustic feedback from either a microphone or turntable.
4. Hum when plugging in an external source to your amplifier.
5. Initial turn-on thump caused by poorly designed amplifiers.
6. Continuous tones from oscillators or demonstration records.

Any of the above conditions can put undue stress on the speaker system at high volume levels.

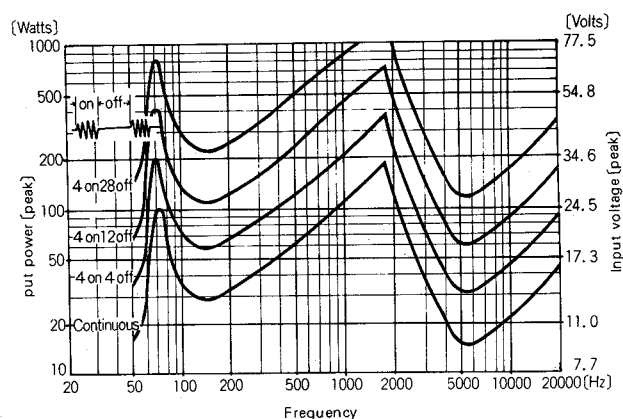


Figure 1. Allowable input signal according to input wave form.

Note - Input power is calculated by the rating impedance.

■ GRILLE INSTALLATION AND REMOVAL

The grilles can be installed and removed as shown in figure 2.

Installation: Align the holes of the rubber "feet" on the frames of the grille with the projections on the cabinet, and then push gently.

Removal: Grasp the grille frame and gently put it toward you.

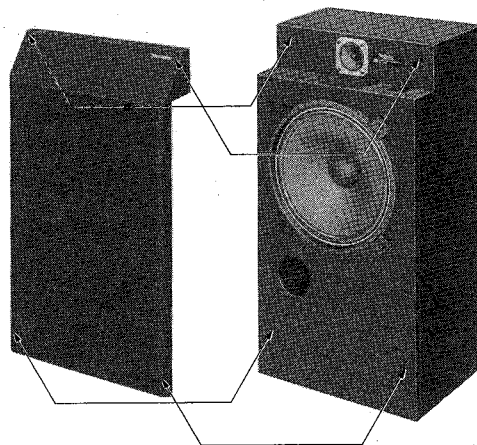
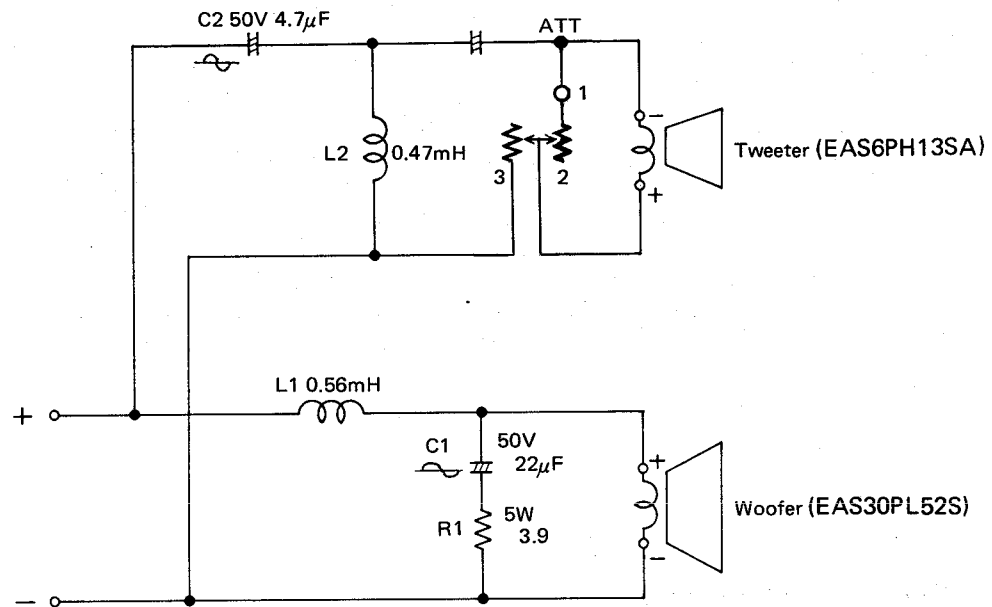


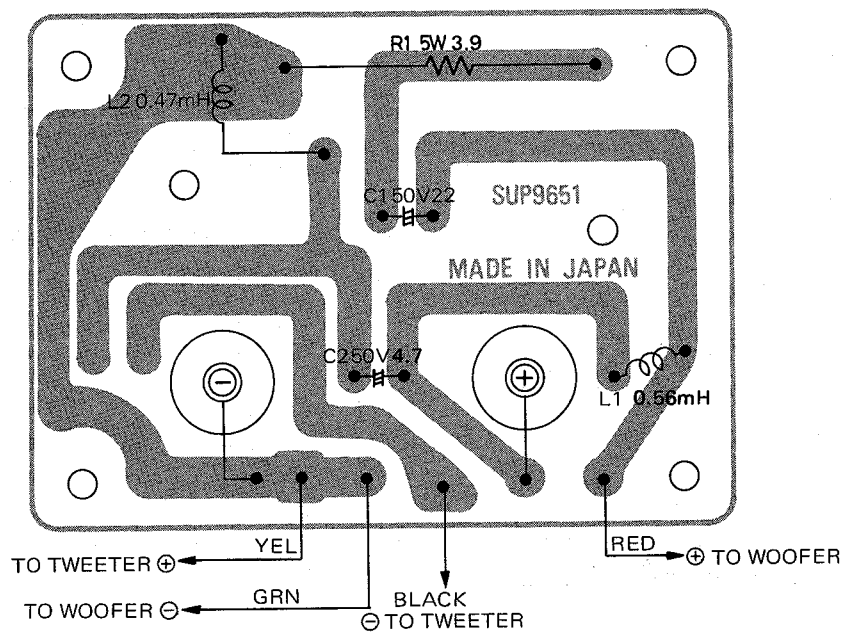
Figure 2

■ SCHEMATIC DIAGRAM

(This schematic diagram may be modified at any time with the development of new technology)



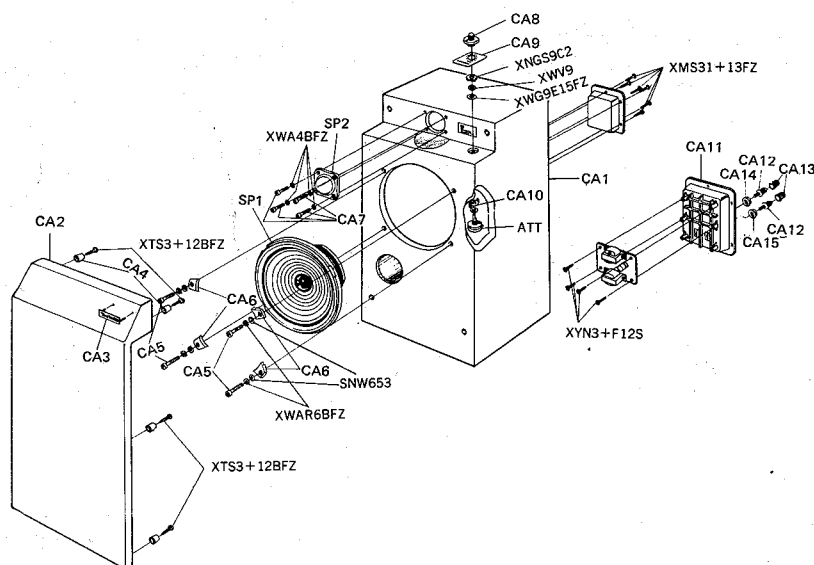
■ CIRCUIT BOARD



■ LOCATION OF PARTS



■ LOCATION OF PARTS



■ REPLACEMENT PARTS LIST

Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks	Ref. No.	Part No.	Description	Per Set (Pcs.)	Remarks
CABINET PARTS					CA13	SNE273-1	Knob, Speaker Terminal	2	
SP1	EAS30PL52S	Woofer, Speaker	1	○	CA14	SGE401-1	Ornament, Knob (Orange)	1	
SP2	EAS6PH13SA	Tweeter, Speaker	1		CA15	SGE401	Ornament, Knob (Black)	1	
L1	SLCE561KU	0.56mH, Coil	1		ACCESSORIES				
L2	SLCE471KU	0.47mH, Coil	1		A1	SQF1639	Instruction Book	1	○
R1	ERF5AK3R9	3.9Ω, 5W, Wire Wound	1		A2	SWX291	Speaker Cord	1	
C1	ECEA50Y22	22μF, 50V, Electrolytic	1		PACKING MATERIALS				
C2	ECEA50Y4R7	4.7μF, 50V, Electrolytic	1		P1	SPG1095	Carton	1	○
ATT	EVWB1AF27Z80	Attenuator	1	○	P2	SPS173	Pad, Corner	4	
CA1	SKA9451W	Cabinet	1	○	P2-1	SPS879-1	Pad, Corner	1	○
CA2	SYB515-1	Speaker Grill	1	○	P2-2	SPS879	Pad, Corner	1	○
CA3	SGB489-2	Badge	1	*○	P2-3	SPS881-1	Pad, Corner	1	○
CA4	SHG1245-2	Net Catch	4		P2-4	SPS881	Pad, Corner	1	○
CA5	XVES6B25FIS	Nut, Woofer	4		P3	SPS1023	Pad, Bottom	1	○
CA6	SGE399	Bracket, Woofer	4		P4	SPS795	Spacer, Grill	1	○
CA7	XVES4B25FIS	Nut, Tweeter	4		P5	SPS797	Spacer, Grill	1	○
CA8	SBN649	Knob, Attenuator	1		P6	SPP507	Polythylene, Bag	1	○
CA9	SGWB5300AP	Panel, Attenuator	1						
CA10	SMN1391	Bracket, Attenuator	1	*					
CA11	SWT117-3	Plate, Speaker Terminal	1						
CA12	SNE281-1S	Pin, Speaker Terminal	2						

■ COMPONENT PACKING PROCEDURE

